MAINE'S ENERGY EFFICIENCY

PROGRAM PLAN

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Introduction

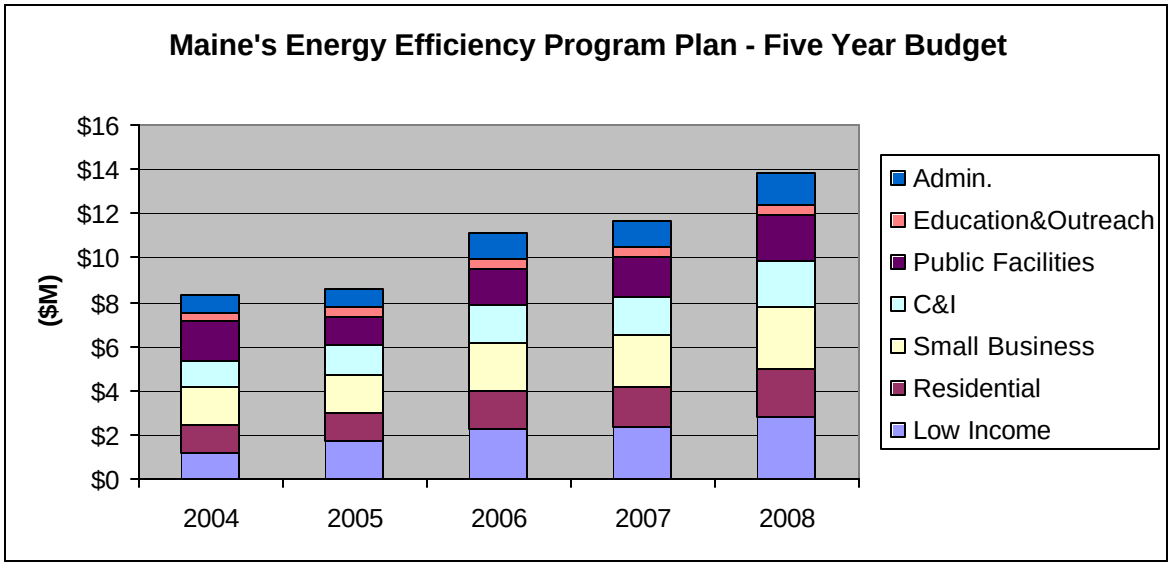
This document describes Maine's Energy Efficiency Program Plan (the Maine Plan); it describes the actions the Maine Public Utilities Commission will take to comply with P.L. 2001, Chapter 624 (The Conservation Act, or The Act). During the past year the Commission has initiated a number of rulemakings and investigations that have provided much of the foundation for the Maine Plan. Each of these has been conducted using a consultative process to gather input from stakeholders.

The Maine Plan provides a five-year estimate of the type of individual programs and the associated energy savings that can be expected given the current budget projections. The Plan should not be viewed as a static document. Certain elements of the plan have been required by legislation and must be included (e.g. the review of existing utility programs or the 20% allocation of funds to the small business and low income sectors). Others, such as the individual programs are in response to guidelines provided by the Act and other stakeholders and are more flexible. The Commission may wish to change the individual program designs to keep them current and improve their effectiveness and it may add new programs as additional opportunities are identified. In keeping with the Conservation Act, the Commission will hold at least one public hearing and invite, accept, review and consider comments and suggestions from interested parties comment prior to substantially revising individual conservation programs or the objectives and overall strategy of the Overall Program. In addition, the Commission will convene an annual open program review session with stakeholders to discuss program implementation issues.

The projected budget shown below is based on the most current projection of revenues available from the utility assessments, expectations of prior conservation contract payouts, and the areas of energy saving opportunity identified through Docket 2002-162. There is a high degree of uncertainty associated with these budget projections. The prior contractual commitments of Central Maine Power Company's Power Partner's program consume approximately half of the available conservation program fund for the year 2003. Although the commitments decrease in subsequent years, they continue to represent a substantial portion of the available budget for the next five years. Significant changes in the patterns of Power Partner's program payouts could, therefore, have significant effects on the overall budget[1]. The revenue projections in the budget are also uncertain as they are based only on proposed assessment levels that will not be certain until the Commission finalizes assessment levels for Consumer Owned Utilities[2]. If there are substantial impacts on the amount of money available to spend on new programs due to the Power Partners contracts, less money will be spent on the commercial and industrial program. If there are impacts due to changed assessment amounts for consumer owned and municipal utilities, the distribution of program benefits and services may need to be examined.

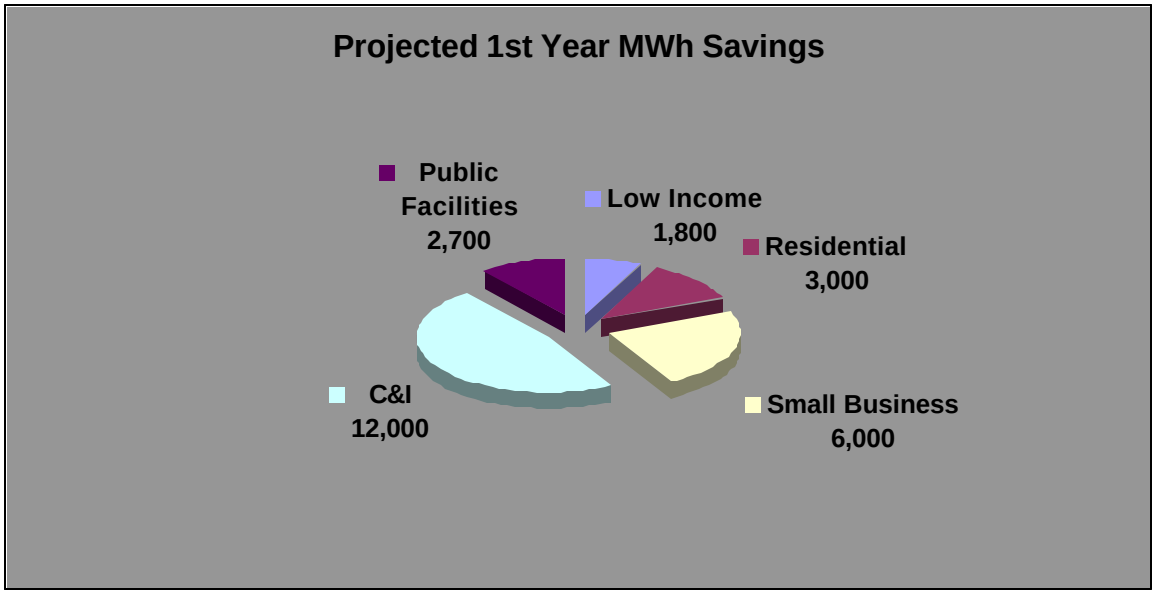
[1] The Commission has initiated an investigation of the Power Partners program contracts in order to respond to the Act's directive.

[2] On May 28, 2003, the Commission opened Docket No. 2003-348 to investigate whether there are circumstances that would justify conservation assessments for consumers of COUs at levels less than those imposed on consumers of Investor Owned Utilities. On June 30, 2003, the Commission opted to reconsider the conservation assessment for Madison Electric works and set the assessment at two levels, .6mils/kWh for customers other than Madison Paper Industries (MPI), and .5% of total revenue received from MPI. On August 11, 2003, the Commission allowed Eastern Maine Electric Co-operative an additional 30 days to request reconsideration of its conservation assessment.



	2004	2005	2006	2007	2008
Low Income	$1,200,000	$1,719,269	$2,218,861	$2,331,525	$2,757,198
Residential	$1,252,679	$1,289,451	$1,718,861	$1,831,525	$2,257,199
Small Business	$1,670,238	$1,719,269	$2,218,861	$2,331,525	$2,757,198
Commercial/Industrial	$1,252,679	$1,289,451	$1,664,146	$1,748,644	$2,067,899
Public Facilities	$1,722,917	$1,289,451	$1,664,146	$1,748,644	$2,067,899
Education&Outreach	$417,560	$429,817	$500,000	$500,000	$500,000
Market Research	$167,024	$171,927	$221,886	$233,153	$275,720
Administration	$668,095	$687,707	$887,544	$932,610	$1,102,879
Total	$8,351,192	$8,596,343	$11,094,304	$11,657,626	$13,785,992

The projected first year energy savings are displayed below. Savings in future years will escalate once program development costs have been incurred and as greater proportions of program expenditures are devoted to incentives, market transformation activities, and training.



The Act requires Maine's Energy Efficiency Program Plan to be cost effective according to criteria established by the Commission. In Docket No.2002-473, the Commission revised its Chapter 380 rule on cost effectiveness and adopted a Modified Societal Test as the basis for gauging cost effectiveness[3]. When bundled together, all of the activities required to implement these proposed programs will cost an estimated $8.3 million and yield estimated present value of benefits of $29.6 million. The ratio of benefit to cost from pursuing this plan is therefore 3.6 to 1.

Goals, Objectives, and Strategies

The Goals, Objectives, and Strategies for the Maine Energy Efficiency Program Plan were developed in Docket No. 2002-162, Commission Order Establishing Goals, Objectives and Strategies for Conservation Programs Implemented Pursuant to P.L. 2001, ch. 624, (the Conservation Act) issued September 24, 2002. The goals objectives and strategies are listed below along with brief descriptions of implementation efforts that are already underway or planned for the near future.

The goals of the Maine Plan are:

I. Improve the efficiency of electric use by Maine residential consumers, businesses and other organizations,
II. Increase consumer awareness of cost effective options for conserving energy,
III. Create more favorable, sustainable market conditions for the increased use of efficient products and services,
IV. Promote sustainable economic development, and
V. Reduce environmental damage associated with energy use.

The Overall Program's objectives are:

A. Implement a portfolio of conservation programs pursuant to a Maine energy conservation plan.

- A portfolio of more narrowly focused individual plans is described below.

B. Implement an organizational model for administration and management of energy conservation programs.

- The Commission has created "Efficiency Maine" to deliver its conservation fund programs.
- It has incorporated the energy programs division of the Department of Economic and Community Development.
- The two functions will merge into a single "Energy Programs Division."
- The Commission has opened an Inquiry (Docket No. 2002-272) and used the information gathered to developed its own rule (Docket No. 2003-517) establishing procedures governing the selection of service providers as directed by 35-A M.R.S.A. §3211-A(3).

C. Review existing utility programs and implement a transition plan by the end of 2003.

[3] See November 6, 2002, Order for more detail.

- Central Maine Power Company's "Nickel Program" and Bangor Hydro Electric Company's Commercial Lighting Incentive Program have been terminated due to their overlap with Efficiency Maine's small business program (see June 17, 2003 Order Docket No. 2002-161).
- The Commission has initiated an investigation into the administration of contracts associated with prior utility-sponsored conservation programs (Docket No. 2003-544).
- We seek comment in this document on existing utility sponsored water heater wrap programs.
- We are discussing joint or coordinated marketing of residential lighting programs with Consumer Owned Utilities.

D. Create an awareness of the conservation programs and the value of energy efficiency among the general public.

- As described more fully below, each of the individual programs within this overall program plan includes an educational component.
- We will develop a broadly based general awareness campaign to promote the early adoption of more efficient ENERGY STAR® products.

E. Increase the availability of energy efficient products and services through Maine businesses.

- As described more fully below, wherever possible, individual programs have been designed to increase the efficiency of products found in the supply stream normally used by Maine residents and businesses.

Strategies to ensure the portfolio of programs meets the goals and objectives of the Overall Program Plan are as follows:

1. Market Assessments: Conduct assessment studies as needed to understand the markets for efficiency products and services in Maine, and develop baseline measurements for efficient products and services to support program design and evaluation.

- Optimal Energy Incorporated in Docket 2002-162 estimated the amount of increased efficiency achievable through energy efficiency programs.
- MPUC is collaborating with the Maine Department of Administrative and Financial Services' (DAFS) Bureau of General Services (BGS) to conduct a comprehensive survey of State owned buildings.
- Maine residents were surveyed to determine their awareness of efficient products prior to program start-up. (Maine Survey: Research Report by Market Decisions)
- All interim programs were developed with feedback mechanisms built into them to allow for program refinement.

2. Program Design and Implementation:

a) Develop and implement a portfolio of programs that allows all customer groups to participate in one or more programs.

b) Implement programs targeted at hard to reach markets, 20% of funds directed at programs for low-income customers and 20% directed at programs for small business customers.

- The terms “Low Income” and “Small Business” customer were defined in revisions to the Commission’s rule on Cost effectiveness Chapter 380. See Order in Docket No. 2002-473.

c) Design programs that balance primary effects with secondary effects.

- Each of the individual programs in the portfolio described below is designed to include an educational effort, and most include some element of market transformation.

d) Encourage the development of an energy efficiency infrastructure using existing market channels for program delivery where possible.

- The low-income residential program relies on the existing relationships among the Maine State Housing Authority (MSHA), the Community Action Programs (CAPS), and low-income customers to deliver the program.
- The residential ENERGY STAR® Efficient Products Program relies on existing retail businesses to deliver energy efficient products.
- The Small Business Program Efficiency program relies on recruiting trade allies who are already part of the supply chain to deliver efficient products and services to participants.
- The Commercial and Industrial program is designed to encourage customers, rather than Energy Service Companies, to sponsor projects.

e) Assess current utility programs to ensure compatibility with PUC sponsored programs.

f) Integrate educational efforts into all programs to promote buying habits for more energy efficient products and more energy efficient behaviors.

g) Implement an overall marketing effort to develop a clear brand image for our programs, support program implementation efforts, and increase public awareness of the benefits of energy efficiency.

- The Commission has created the Efficiency Maine brand which will be included in the promotional materials for all individual programs.
- Brand promotion will expand as budgets allow.

h) Adopt or adapt regional or national programs or programs from other states, as appropriate.

- The Commission learns of other regional and national programs through the Northeast Energy Efficiency Partnership (NEEP), and The Consortium for Energy Efficiency (CEE). We will continue our membership in both organizations.
- Residential and Commercial programs will promote the ENERGY STAR® brand along with United States Environmental Protection Agency and Department of Energy who have jointly created the brand.

3. Monitoring and evaluation:

a) Develop tracking and evaluation criteria and procedures for each program. Coordinate with regional efforts where possible.

b) Conduct evaluations that provide guidance on improving the efficient delivery and cost effectiveness of individual programs, but which are not so detailed as to create false precision.

- We will conduct continuous informal evaluations of individual programs on an ongoing basis and make changes when warranted.
- Formal evaluations by independent contractors will be conducted for each program as funds allow.

4. Funding:
   a) Develop and implement an accounting and reporting system to track revenues by source and by category and to support evaluation and reporting requirements.
   b) Seek additional sources of funds to enhance and support the plan.
   c) Set incentives at the minimum level required to accomplish program objectives.
5. Communication, coordination, and reporting:
   a) Implement a process for ongoing public stakeholder communication.
      - We will file an annual report on the energy conservation program to the Legislature.
      - An Efficiency Maine website has been created and is being kept current.
      - We will convene annual meeting with stakeholders.

   b) Coordinate our efforts with other state agencies with energy-related responsibilities.
      - The Commission is a member of the Energy Resources Council (ERC) through which State agencies coordinate their energy-related activities.
      - Programs are being jointly implemented with a number of state agencies including the Division of Administrative and Financial Services (DAFS), the Maine Department of Education (MDOE), the Maine Department of Transportation (MDOT), the Maine Department of Environmental Protection (MDEP), the Maine Department of Economic and Community Development (MDECD), and the Maine State Housing Authority.

   c) Monitor national and regional activities and participate when beneficial.
      - We are members of the Northeast Energy Efficiency Partnership and the Consortium for Energy Efficiency.
      - The Commission also monitors regional events through the New England Conference of Public Utility Commissioners (NECPUC). National activities are monitored through a variety of newsletters and the National Association of Regulatory Utility Commissioners.

   d) Report to the legislature by December 1st of each year to describe the Commission's activities, programs implemented or planned, the likely cost effectiveness of programs, the financial condition of the conservation funds, and any recommended changes to the Conservation Act.

A comprehensive discussion of why each goal, objective, and strategy listed above was selected by the Commission can be found in the September 24, 2002 Order in Docket # 2002-162.

Individually Focused Programs

Maine's Energy Efficiency Program Plan must address all of the goals, objectives, and strategies articulated by the Commission in its September 24, 2002 Order in Docket No. 2002-162. It is unlikely any single program could address all of the goals, achieve all of the objectives, and implement all of the strategies laid out in the Order. Therefore, the Maine Plan relies on the combination of a number of individually focused programs, the sum total of whose goals, objectives, and strategies will satisfy the requirements of the Commission Order and the Conservation Act. The individually focused programs are each summarily described below.

Program	Customer Group	2004 Budget (millions)	Projected MWh/yr Savings	B/C Ratio	Goals	Objectives	Strategies
Low Income Residential	LIHEAP qualified households	$1.2	1,800	1.2	I, II, V	A, D	2a, 2b, 2c, 2d, 2h, 3b, 4b, 5b
ENERGY STAR® Products	Residential	$1.3	3,000	1.4	I, II, III, V	A, D, E	2a, 2c, 2d, 2f, 2g, 2h, 3a, 3b, 4b, 4c, 5c
Water Heater Wrap	Residential						
Small Business Efficiency Program	Businesses with less than 50 employees	$1.7	6,000	2.0	I, II, III, IV, V	A, C, D, E	2a, 2b, 2d, 2d, 2e, 2f, 2g, 3a, 3b, 4b, 4c, 5b
Agricultural Program	Maine agricultural businesses	$.2	690	2.0	I, II, III, IV, V	A, D, E	2a, 2d, 2f, 2g, 3a, 3b, 4a, 4b, 4c, 5b
Commercial Industrial	Maine businesses	$1.3	12,000	15	I, II, III, IV, V	A, D, E	2a, 2c, 2d, 2f, 2g, 2h, 3a, 3b, 4b, 4c
State Buildings	State owned buildings	$1.7	2,700	1	I, III, V	A, E	2a, 2d, 3a, 3b, 4b, 4c, 5b
High Performance Schools	New schools				I, II, III, V	A, B, E	2a, 2c, 2d, 2f, 2h, 3a, 3b, 4b, 4c, 5b
Existing Schools	Existing schools		N/A		I, II, V	A	2b, 2f, 3a, 4c, 5b
Education Programs	School children	$.2		N/A	I, II, III, V	A, D	2a, 2c, 2d, 2f, 2g, 2h, 3a, 3b, 4b, 5b, 5c
Building Operator Certification	Facility managers	$.2		5.9	I, II, III, V	A, D, E	2a, 2c, 2d, 2f, 2g, 2h, 3a, 3b, 4b, 5b, 5c
Total Plan		**$8.3**	**26,190**	**3.6**			

Residential Programs

Low-Income Program:

This program decreases the energy consumption of low-income consumers. It continues the refrigerator replacement component of the low-income customer interim energy conservation program approved in Docket No. 2002-161, June 13, 2002, and adds efficient lighting, water bed replacements, and other measures deemed cost effective as additional program measures that customers may receive. The program supports the legislative mandate to target at least 20% of the total conservation program funds to low-income customers and is reasonably likely to be cost effective since each of the measures provided to participating customers is, on its own, cost effective. Administrative costs are minimized through the use of an existing delivery mechanism – Maine State Housing Authority (MSHA) working with the local Community Action Programs (CAP) which already conduct the income screening and qualification of customers and the use of already trained[4] crews to deliver the energy efficiency services. The program also includes an educational component - participants will receive instruction on how to use and properly maintain products received through the program at the time of product delivery and installation.

The Low Income Program achieves the following Overall Program Goals, Objectives, and Strategies:

Goals: I, II, V
Objectives: A, D
Strategies: 2a, 2b, 2c, 2d, 2h, 3b, 4b, 5b

The Low Income Program's individual Goals, Objectives, and Strategies are:

Goals:

I. Reduce energy costs for Low Income consumers.
II. Increase awareness of efficient ways to use energy.

Objectives:

A. Replace inefficient appliances and lighting with cost effective, energy efficient appliances and lighting in Low Income homes.
   1. Replace 1,500 refrigerators each year.
   2. Install 9,600 efficient Compact Flourescent Lights (CFLs) and replace 100 torchieres.
   3. Replace waterbeds when appropriate.
   4. Achieve 1,800 MWh of annual savings.

B. Recruit the participation of every Community Action Program in Maine

Budget: The budget for the Low Income Replacement Program for 2004 is based on preliminary negotiations with MSHA and is estimated to be $1.2 million. Future years are based on a 20% share of estimated available funding.

Year	2004	2005	2006	2007	2008
Budget	$1.2 Million	$1.72 Million	$2.2 Million	$2.3 Million	$2.7 Million

[4] When necessary, the Commission will provide additional training to CAP crews on the benefits and use of new technology.

Cost Effectiveness: The Low Income residential program is estimated to have a benefit to cost ratio of 1.23 to 1 based on work conducted by Optimal Energy Incorporated for Maine's office of Public Advocate[5]. Program benefit for 2004 is therefore projected to be $1.48 million.

Evaluation: The Maine State Housing Authority will track the information listed in the program plan and will annually report:

- The number of CFLs installed and the number of torchieres, refrigerators, and water beds replaced and the expected reduction in kWh consumption from each.
- The activity level of each CAP.
- An evaluation of whether the program has met its goals and objectives will be performed each year prior to our annual report to the legislature on the status of the efficiency programs.

Residential ENERGY STAR® Products Program[6]:

This program continues and expands the residential lighting program launched as an interim program in February 2003. The program will support the increased sales, promotion and use of energy efficient ENERGY STAR® lighting, appliances, consumer electronics and/or other electricity consuming products throughout Maine with a general awareness campaign. In addition, the program will provide incentives to increase the adoption of efficient lighting through local retailers. As we gain experience with the lighting program, and depending on the availability of funds and observed need, the program may expand to provide incentives or special promotions of ENERGY STAR® products other than efficient lighting. The program will rely on an implementation contractor[7] that will work through a network of participating retailers who sell energy efficient products directly to the approximately 600,000 residential consumers in the State. The implementation contractor will support the program with an active retailer outreach and support effort and coupon redemption activity. Educational aspects of this program include the mass marketing of ENERGY STAR® products, retailer training, and product displays in the retail outlets. The program is reasonably likely to be cost effective due to the overwhelming cost effectiveness of each of the measures for which incentives are provided. Evaluations of more mature similarly constructed programs consistently indicate program cost effectiveness.

The Residential ENERGY STAR® Program addresses the following Overall Program Goals, Objectives, and Strategies:

Goals: I, II, III, V
Objectives: A, D, E
Strategies: 2a, 2c, 2d, 2f, 2g, 2h, 3a, 3b, 4b, 4c, 5c

The Program's individual Goals, Objectives, and Strategies are:

Goals:

I. Improve the efficiency of electric use by Maine residential customers.

[5] Table 5 in "The Achievable Potential for Electric Efficiency Savings in Maine" October 22, 2002.

[6] ENERGY STAR® is a trademarked program to promote the increased purchase of energy efficient products. The program is jointly operated by the United States Department of Energy and the U.S. Environmental Protection Agency.

[7] Our implementation contractor will be selected through a competitive solicitation process in keeping with section 3.A. of the Conservation Act.

Objectives:

A. Increase consumer awareness and use of ENERGY STAR® products.
B. Increase the number of retailers offering ENERGY STAR® products and the variety of products offered.
C. Create a self-sustaining, robust market for efficient lighting in Maine.
D. Promote the accelerated adoption of qualifying bulbs fixtures.
E. Achieve 3000[8] MWh/yr of energy savings.

Budget: The projected budget for the Program will be 15% of the overall program budget. Based on current projections, this yields the following estimate for the next 5 years:

Year	2004	2005	2006	2007	2008
Budget	$1.3 Million	$1.3 Million	$1.7 Million	$1.8 Million	$2.3 Million

Cost Effectiveness: The Residential ENERGY STAR® Products program is estimated to have a benefit to cost ratio of 1.4 to 1 based on work conducted by Optimal Energy Incorporated for Maine's office of Public Advocate.[9] Using this ratio, the net present value of the program would be a net benefit of approximately $1.83 million for the 2004 program year.

Evaluation: The implementation contractor will track the information listed in the program plan and report on:

- The number and variety of ENERGY STAR® products offered and delivered through the various retail outlets.
- The quality of store displays.
- The level of retail store personnel training and knowledge of products.

The Commission will evaluate the market transformation aspects of the program by working with its implementation contractor and regional organizations such as the Northeast Energy Efficiency Partnership (NEEP) and the Consortium for Energy Efficiency (CEE) to determine whether;

- The sales of ENERGY STAR® products are greater in states that offer such programs.
- Consumer awareness and valuation of the ENERGY STAR® brand is greater in such states.
- The stocking and sales practices of retail chains are changing to include an increased emphasis on ENERGY STAR® branded products.

An annual assessment of whether the program has met its energy savings targets will be included in our annual report to the legislature on the status of the efficiency programs.

Water Heater Wrap Programs:

Central Maine Power Company will continue its "Bundle-Up" water heater program. The program budget will not exceed $150,000 per year including promotional costs and will be established only after funding for the statewide Residential ENERGY STAR® Products program

[8] Optimal estimated 5153 MWh/yr at $2 million funding level. 3000 MWh/yr is derived from the ratio of $1.3 million (available funding) to $2 million (the amount recommended by Optimal). Program B/C ratio of 1.4 to 1 was based on a full scale "Efficient Products Program."
[9] Table 5 in "The Achievable Potential for Electric Efficiency Savings in Maine" October 22, 2002.

has been secured. The annual program budgets and promotions will be developed by Central Maine Power and approved by the Commission.

Commercial and Industrial Programs

Small Business Efficiency Program[10]:

This program supports the legislative mandate to target at least 20% of the total conservation program funds to small business consumers and is a continuation of the interim small business program initiated in February, 2003. The program will utilize an implementation contractor[11] to deliver efficient products and services to small businesses through their normal product supply channels and by recruiting trade allies who are already part of the supply chain for energy using devices. Trade allies will work with the program contractor and administrator to introduce more efficient equipment into the supply chain. Prescribed incentives are available for a variety of energy consuming devices that are routinely found in a small business environment. Custom incentives are available for other equipment. The education and outreach activities built into this program include the training of trade allies and the promotion of the program and efficient products through it at industry trade shows. This program is reasonably likely to be cost effective because the cost of the more efficient equipment promoted through the program is offset by the marginal energy costs avoided. Incentives offered to customers to purchase the more efficient equipment are in all cases less than the total avoided cost benefit.

The Small Business Efficiency Program addresses the following Overall Program Goals, Objectives, and Strategies:

Goals: I, II, III, IV, V
Objectives: A, C, D, E
Strategies: 2a, 2b, 2d, 2e, 2f, 2g, 3a, 3b, 4b, 4c, 5b

The Program's individual Goals, Objectives, and Strategies are:

Goals:

I. Improve the efficiency of electric use by small businesses in Maine.
II. Transform the small business market for energy using equipment in Maine.

Objectives:

A. Increase small business awareness of the benefits of energy efficiency and their use of energy efficient products.
B. Reduce inefficient electricity consumption by small business customers.
C. Increase the number of Maine suppliers and contractors selling energy efficient products and services to small businesses.
D. Achieve 6,000 MWh/yr[12] of energy savings in small Maine businesses.

[10] A "Small Business" is a business customer of a transmission and distribution utility that employs 50 or fewer full-time equivalent employees.
[11] Similar to the Residential ENERGY STAR Products program, the implementation contractor will be selected through a competitive solicitation in keeping with section 3.A . of the Conservation Act.
[12] Savings estimate is based on recent achievements (1999) of CMP Nickel Program, and estimates for the "C&I Equipment and Product Replacement" program recommended by OPA consultants Optimal Energy.

Budget: The projected budget for the Program will be 20% of the overall program budget. Based on current projections, this yields the following estimate for the next 5 years[13]:

Year	2004	2005	2006	2007	2008
Budget	$1.7 Million	$1.7 Million	$2.2 Million	$2.3 Million	$2.8 Million

Cost Effectiveness: The Small Business Efficiency Program is estimated to have a benefit to cost ratio of 2 to 1 based on work conducted by Optimal Energy Incorporated for Maine's office of Public Advocate.[14] Program benefit for 2004 is therefore projected to be $3.4 million.

Evaluation: The implementation contractor will track and report on:

- The number of high efficiency products purchased through the program.
- The estimated annual and lifetime kWh savings for the products.
- The number of workshops/seminars/public events at which it has promoted the program.
- The number of suppliers and contractors participating in the program.

An evaluation of whether the program has met its annual energy savings targets will be performed each year prior to our annual report to the legislature on the status of the efficiency programs.

Agricultural Program:

This program responds to the need to increase the competitiveness of Maine's agricultural industry. Through more efficient equipment and processes, Maine's agricultural sector can improve product quality and lower its operating costs. Many of the products used in the agricultural industry are similar to those which receive rebates through the small business program. The delivery chain for those products is somewhat different from the delivery chain for small businesses, and some agricultural enterprises do not meet the Commission definition of a small business. This program will be focused on the unique characteristics of the agricultural sector of Maine's economy. A specialized implementation contractor will be retained through a competitive bid process. The contractor will be responsible for marketing the program to the agricultural community, providing energy audits to those who would like, and offering incentives for qualified products. The program is expected to be cost effective because the products and services eligible for incentives will often be the same as those in the small business program. Equipment that is not routinely offered through the small business program will be pre-qualified prior to program implementation.

The Agricultural Efficiency Program addresses the following Overall Program Goals, Objectives, and Strategies:

Goals: I, II, III, IV, V
Objectives: A, D, E
Strategies: 2a, 2d, 2f, 2g, 3a, 3b, 4a, 4b, 4c, 5b

The Program's individual Goals, Objectives, and Strategies are:

Goals:

[13] This chart shows 18% (90% of 20% with 10% of 20% allocated to the agricultural program)
[14] Table 5 in "The Achievable Potential for Electric Efficiency Savings in Maine," October 22, 2002.

I. Improve the efficiency of electric use in Maine's agricultural sector.
II. Transform the market for energy using equipment in Maine's agricultural sector.

Objectives:

A. Increase awareness of the benefits of energy efficiency and their use of energy efficient products in Maine's agricultural sector.
B. Reduce inefficient electricity consumption by agricultural customers.
C. Increase the number of Maine suppliers and contractors selling energy efficient products and services to agricultural customers.
D. Achieve 690 MWh/yr of energy savings[15].

Budget: Many of the comments we received were from agricultural enterprises that would also qualify as small businesses. We therefore expect much of the funding for this program to come from the small business program. The cost of services supplied to larger businesses, however, will be counted in the Commercial Industrial program budget. We expect the cost of this program to for the next five years to be about 10% of the total small business program costs or:

Year	2004	2005	2006	2007	2008
Budget	$167,000	$171,900	$221,900	$233,200	$275,700

Cost Effectiveness: This program is projected to be cost effective with an expected benefit to cost ratio of 2 to 1 - the same as projections for the small Business Efficiency Program Equipment. Projected program benefit for 2004 is therefore $334,000.

Evaluation: Similar to the tracking performed by the implementation contractor for the small business program, the program service providers will report on;

- The number of audits conducted.
- The implementation rate of audit recommendations.
- The number of high efficiency products purchased through the program.
- The estimated annual and lifetime kWh savings for the products.
- The number of workshops/seminars/public events at which it has promoted the program.
- The number of suppliers and contractors participating in the program.

The information will be used to report annually on whether the program has met its projected energy savings. Results will be included in our annual legislative report.

Commercial Industrial Program:

This program is designed to encourage commercial and industrial businesses in Maine to adopt energy efficient business practices to lower their energy costs through a variety of mechanisms[16]. The program facilitates market transformation by providing information through targeted education programs which could include but are not limited to programs such as "The Compressed Air Challenge," and "One 2 Five", and certification activities such as the Building Operator Certification program (BOC) and the Certified Energy Manager (CEM) program. The program will also rely on a competitively selected implementation contractor to provide direct financial incentives to purchase energy efficient equipment, or to assist with the cost of design

[15] Target is derived by using a ratio of available funds to the budget proposed by EnSave times their estimated annual program savings.

[16] The program is not limited to "large" commercial and industrial enterprises. There are companies that fit the "Small Business" definition that use large amounts of energy. Those entities might not be attracted to the capped incentives available through the small business program but might prefer the incentives offered under this program.

for more efficient processes. The incentive portion of this program is likely to be cost effective because each application for a custom incentive will be individually screened and all prescriptive rebates will be pre-screened to ensure they pass the modified societal test.

The Commercial Industrial Program addresses the following Overall Program Goals, Objectives, and Strategies:

Goals: I, II, III, IV, V
Objectives: A, D, E
Strategies: 2a, 2c, 2d, 2f, 2g, 2h, 3a, 3b, 4b, 4c

The Program's individual Goals, Objectives, and Strategies are:

Goals:

I. Improve the efficiency of energy use in commercial and industrial business applications.
II. Encourage the development of energy efficiency skills in Maine.

Objectives:

A. Increase the energy productivity of businesses in Maine.
B. Incorporate consideration of energy issues into standard "good business practice."
C. Increase the number of suppliers in Maine selling energy efficient products and services.
D. Provide focused training and educational opportunities to the business sector.
E. Develop a network of trade allies to create a self-sustaining market for efficient products and services in Maine.
F. Include a preference for local contractors in the provision of energy services.
G. Achieve 12,000 MWh/yr of energy savings in Maine businesses[17].

Budget: The projected budget for the Program will be 15% of the overall program budget. Based on current projections, this yields the following estimate for the next 5 years:

Year	2004	2005	2006	2007	2008
Budget	$1.3 Million	$1.3 Million	$1.7 Million	$1.7 Million	$2.1 Million

Cost Effectiveness: This program is projected to be cost effective with an expected benefit to cost ratio of 15 to 1 based on the experiences of Central Maine Power Company's "Strategic Partnering" program[18]. Projected program benefit for 2004 is therefore $19.5 million.

Evaluation: Efficiency Maine Staff will:

- Track the number and type of targeted educational program offerings and the individuals and corporations participating.
- Survey course participants to assess their views on the value of the information provided through the courses.
- Inquire whether information gained from the trainings has led to increases in efficiency or productivity at their place of business.

[17] Savings estimate is based on recent achievements (1999) of CMP Strategic Partners Program.
[18] CMP Chapter 380 Demand-Side Management Quarterly Report, December 1999, provides an estimated benefit to cost ratio of 15.63 to 1 for the Strategic Partnering Program.

The implementation contractor will:

- Track and report on the products purchased through the program incentive mechanism.
- Provide estimated energy savings associated with that equipment.
- Report on any design changes resulting from design assistance services purchased through the program and any associated energy savings.

The results of our program assessment and tracking will be included in our annual report to the legislature on the status of the efficiency programs.

Public Facilities

State Buildings Program:

This program continues the interim energy efficiency program for State buildings that was approved in Docket No. 2002-161, June 13, 2002. The program improves the efficiency and decreases the energy consumption of State owned buildings. Buildings that have been identified by the Maine Bureau of General Services as having high energy costs will be eligible for program funding if it is determined that efficiency retrofits would be cost effective according to the modified societal test. The program is expected to be cost effective because each project funded will be pre-screened to ensure that project benefits exceed costs. The program will supplement the joint MPUC and BGS effort to conduct a survey of all State-owned buildings to determine the feasibility of using a bond to retrofit a large group of buildings and to use the reductions in operating costs to retire the bond. If the Bureau of General Services is successful in obtaining a capital improvement bond to fund retrofits, the Commission will continue to provide expertise and administrative assistance to BGS and will fund building improvements until the bond money becomes available. Should State building energy efficiency opportunities not eligible for funding through a State bond arise, or should the effort to finance efficiency improvements through a bond program fail altogether, the Commission will retain the flexibility to implement measures through this program and will use information gathered through the survey to identify and prioritize additional projects.

The State Buildings Program addresses the following Overall Program Goals, Objectives, and Strategies:

Goals: I, III, V
Objectives: A, E
Strategies: 2a, 2d, 3a, 3b, 4b, 4c, 5b

The Program's individual Goals, Objectives, and Strategies are:

Goals:

I. Improve the efficiency of energy use in State buildings.

Objectives:

A. Install efficient equipment in buildings with pre-identified needs.
B. Reduce State energy and operating costs to benefit all taxpayers.
C. Assist in financing projects for which funding is unavailable.

Budget: Ongoing improvements to State property after 2004 may be funded through a bond measure and require no additional funds from the Conservation Fund. However, if the State is

unable to obtain a bond for energy related capital improvements, the projected budget for this Program will be a share of the roughly 15% of the overall program budget that is set aside in the "schools and government" category of the overall program budget.

Cost Effectiveness: The benefit to cost ratio of all three "Public Facilities" efficiency programs is estimated to be 1 for the purposes of this plan proposal. The programs are expected to be cost effective, but they are all new and little comparable data from other programs exists with which to make a better estimate. Building improvements approved for funding under the State Buildings program will be pre-screened by Commission Staff to ensure that the ratio of program benefits to costs is greater than 1.

Evaluation: Data that will be tracked and used to determine whether the program has met its goals include:

- The estimated energy consumption of the existing building before and after the Energy Efficiency Measure (EEM).
- The estimated peak demand impacts before and after EEM installation.
- The estimated life of the EEM.
- The estimated installed cost.
- Estimates of other fuel savings.
- The estimated total decreases in participating facility annual operating costs.

Maine High Performance Schools Program:

This program addresses the barriers to construction of energy efficient new schools. Approximately 5 to 10 new schools are constructed each year in Maine. The design process and funding levels for new schools are influenced by multiple agencies and organizations, none of which is charged with ensuring that the new schools have energy efficient designs as one of the goals to be met. In this program, the MPUC will coordinate the efforts of MDOE, BGS, and the MSMA to encourage the design of energy efficient buildings and the use of efficient technologies in new schools. Educational activities associated with this program will include a series of energy efficient school construction workshops targeted at both the architectural and engineering community who design the buildings and the lay community that comprise school boards and administrators. In addition, the program requires the operators of buildings that participate in this program to receive training and building operator certification to ensure that new energy systems are properly operated and maintained. This Maine High Performance School Program continues the interim energy conservation program for schools that was approved in Docket No. 2002-161, June 13, 2002.

The Maine High Performance Schools Program addresses the following Overall Program Goals, Objectives, and Strategies:

Goals: I, II, III, V
Objectives: A, B, E
Strategies: 2a, 2c, 2d, 2f, 2h, 3a, 3b, 4b, 4c, 5b

The Program's individual Goals, Objectives, and Strategies are:

Goals:

I. Encourage school districts to adopt high performance designs and install cost effective energy efficient systems they would otherwise forego.

II. Increase awareness and understanding of energy efficiency among various stakeholder groups.

Objectives:

A. Influence the MDOE, BGS, MSMA review process for new school construction so that it includes consideration of equipment and technologies that exceed efficiency requirements of energy codes.
B. Include education of building operators to maintain premium building performance.
C. Reduce the operating and maintenance costs to municipalities of new school buildings.
D. Encourage building commissioning to ensure facilities operate as designed.
E. Encourage new schools to seek certification as LEED.
F. Between this program and the State Buildings program save 2,700 MWh/yr.

Budget: The projected budget for the Program will be a share of the 15% of the overall program budget that is set aside in the "schools and government" category of the overall program budget. As mentioned above, the budget for schools and government will be split between the High Performance Schools Program and the State Buildings Program.

Cost Effectiveness: The benefit to cost ratio of all three "Public Facilities" efficiency programs is estimated to be 1 for the purposes of this plan proposal. Efficiency measures in new schools approved for funding under this program will be pre-screened by the Commission's Program Technical Advisor to ensure that the ratio of program benefits to costs is greater than 1.

Evaluation: Data that will be tracked and used to determine program effectiveness include:

- The number of participating schools.
- The architectural and engineering companies that have participated in the program.
- Their suggestions for program improvement.
- The number of workshops, make up of audience, and attendance at sessions presenting the program.
- The percentage of participating schools that pursue LEED certification.
- The number of facilities which pursue formal building commissioning.
- Building operators certified through BOC.
- Energy savings attributed to program participation.
- Estimates of program cost effectiveness.

Existing Schools Efficiency Improvement Program:

This program is designed to help schools install high efficiency equipment either at the time of replacement or when they determine that a retrofit of existing systems would be advantageous for them. Much of the information provided through Docket 2002-162 indicated that the potential energy savings from such a program would be modest. Participants in the Interim Building Operator Certification (BOC) Program have noticed inefficient systems within their schools upon completion of the course and have requested assistance to replace those systems. Because school systems are not considered small businesses, they are not eligible to pursue funding under the small business program, but they are interested in precisely the same kind of equipment replacements. The program will allow school systems to access the same level of assistance available to small businesses through the Small Business Program. The program is therefore reasonably likely to be cost effective for the same reasons as the small business program. It will rely on the same contractors and trade allies for the provision of services, and

will also utilize the Small Business implementation contractor for processing of incentives. Cost for the program will be counted against the "Public Facilities" programs budget.

Goals: I, II, V
Objectives: A
Strategies: 2b, 2f, 3a, 4c, 5b

The Program's individual Goals, Objectives, and Strategies are:

Goals:

I. Improve the efficiency of electric use in Maine's schools from kindergarten through high school.

Objectives:

A. Reduce operating costs for Maine schools.
B. Complement BOC course with implementation assistance for course participants.

Cost Effectiveness: The benefit to cost ratio of all three "Public Facilities" efficiency programs is estimated to be 1 for the purposes of this plan proposal. Efficiency measures approved for incentive funding in existing schools under this program will be similar to those approved in the Small Business Efficiency Program which has a projected benefit to cost ration of 2 to 1. The ratio of program benefits to costs for this program should therefore be greater than 1.

Budget: The projected budget for this Program will be a share of the 15% of the overall program budget set aside in the "Schools and Government" category of the overall program budget. As mentioned above, that budget will be split between this Existing Schools Efficiency Improvement Program, the State Buildings Program, and the High Efficiency Schools Program. Based on current projections, this yields the following estimate for the next 5 years for all three programs combined:

"Public Facilities" Budget – includes High Performance New Schools, State Buildings, and Existing Schools Efficiency Improvement Programs.

Year	2004	2005	2006	2007	2008
Budget	$1.7 Million	$1.3 Million	$1.7 Million	$1.7 Million	$2.1 Million

Education and Outreach Programs:

Education and outreach is an essential part of any program whose goal is to induce a lasting change in consumer behavior. Some of these programs were conducted in the past in Maine, but the greatest emphasis was on the acquisition of the energy resources afforded by primary effect programs. The Conservation Act makes it clear that the Commission is to include educational programs whose goal is to induce long-term changes in customer behavior:

> The Commission shall consider, without limitation, conservation programs that;
>
> 1) Increase consumer awareness of cost effective options for conserving energy;

> 2) Create more favorable market conditions for the increased use of efficient products and services; and
>
> 3) Promote sustainable economic development and reduced environmental damage.[19]

There are educational components in nearly every individual program offered through the overall program plan. They employ a variety of techniques which vary from focused, highly specific technical trainings targeted at narrow audiences, to broad educational efforts designed to market more efficient products to the general public. Where possible, we have incorporated the cost of most educational programs into the budget of other related programs whose goal is the delivery of services. Two programs described below, however, are more distinct in their delivery than others so they are included in the general "Education and Outreach" budget. In addition, since the MPUC has inherited the responsibility for enforcement of the State's Energy Codes, we have budgeted additional money to this category for the outreach and training activities that will be necessary to fulfill that responsibility.

Education Programs:

Two energy education programs pre-date the Conservation Act. The Maine Energy Education Project (MEEP) provides direct instruction on energy efficiency to schoolchildren throughout the State[20]. The program also provides important curriculum materials and information for teachers who wish to include an energy component to their classroom instruction. Maine Public Service Company (MPS) has conducted classroom education programs for many years. These educational programs provide information to young students on how electricity is generated, its cost, and its uses. Both programs instruct students at an early age on how all forms of energy can be used efficiently and wisely, and students who receive the information may be more receptive to participation in the market transformation efforts associated with other programs. The educational programs will be continued, with an effort to ensure comparable information is provided through each. In addition, we will explore further the Maine Math Science Alliance (MMSA) recommendation for curriculum development and testing.

School Educational Programs address the following Overall Program Goals, Objectives, and Strategies:

Goals: I, II, III, V
Objectives: A, D
Strategies: 2a, 2c, 2d, 2f, 2g, 2h, 3a, 3b, 4b, 5b, 5c

The Program's individual Goals, Objectives, and Strategies are:

Goals:

I. Reduce energy consumption in schools
II. Reduce energy consumption in the homes of school children who receive training.

Objectives:

A. Increase awareness and understanding of energy efficiency among Maine schoolchildren.

[19] Section 4, codified as 35-A M.R.S.A. section 3211-A(2).
[20] Excepting the Maine Public Service territory and Washington County.

B. Provide efficiency presentations to 2,000 students per year.
C. Provide energy education materials to 70 schools per year.

Budget: The projected budget for this Program includes funding for the ongoing classroom education activities conducted by MEEP and MPS along with funding for curriculum development as recommended by the MMSA. The combined budget will be up to $185,000 per year.

Cost Effectiveness: It is difficult to assess the cost effectiveness of such programs by themselves. The programs aid in market transformation efforts because they educate consumers on how to use energy efficiently. Rather than attempting to break out the cost effectiveness of these programs by themselves, their costs will be included as a component of the overall Maine Energy Efficiency Program Plan.

Evaluation: Data that will be tracked to determine whether the programs have met their goals include:

- The number of schools visited.
- The number of students and teachers instructed.
- Documented changes to building energy consumption.
- Curriculum development.

Building Operator Certification:

This program encourages energy and resource efficient building operations and maintenance practices in commercial/industrial building environments. The Building Operator Certification (BOC) program is an educational program with demonstrable benefits that will complement other program offerings. The BOC course provides two levels of building operator certification (BOC I and BOC II) in courses that are offered in seven (BOC I) or six (BOC II) day-long sessions spread over an eight to ten week period. Program training will enable building operators to establish preventive maintenance and operations programs and increase the energy efficiency of institutional facilities across the State. The BOC program will provide other, non-energy benefits such as improved equipment performance and productivity increases as well. The program is also used to complement other efficiency programs. Building operators of facilities participating in the "State Buildings" or "High Performance Schools" programs must be certified. In turn, participants of the BOC programs are instructed on the other energy efficiency program offerings. As an interim program, BOC was offered free of charge to the Maine institutional, municipal, and hospital sectors. These sectors will continue to receive free tuition to BOC courses, but the course may also be offered on a fee basis to the for-profit sector.

The Building Operator Certification Program addresses the following Overall Program Goals, Objectives, and Strategies:

Goals: I, II, III, V
Objectives: A, D, E
Strategies: 2a, 2c, 2d, 2f, 2g, 2h, 3a, 3b, 4b, 5b, 5c

The BOC Program's individual Goals, Objectives, and Strategies are:

Goals:

I. Improve energy efficiency and reduce maintenance costs in existing buildings.

II. Increase the effectiveness of other Efficiency Maine programs.

Objectives:

A. Increase the operations and maintenance knowledge and skills of building operators with regard to comfort, safety, and efficiency.
B. Build market awareness of the benefits of improved building performance.
C. Provide Level I certification to 120 building operators each year.
D. Provide Level II certification to 30 building operators each year.

Budget: The projected budget for this Program will be up to $230,000 per year.

Cost Effectiveness: The ratio of benefits to costs for this program is projected to be 5.9 to 1 based on the evaluation of a similar program conducted by the Northwest Energy Efficiency Alliance. Program benefit would therefore be $1.36 million at the maximum budget levels.

Evaluation: Data that will be tracked to determine whether the program has met its goals include:

- The number of courses offered.
- The number of students certified.
- Student responses to a questionnaire asking how they have used the course, and other information gathered through our regional efforts.

"Education and Outreach" Budget

Year	2004	2005	2006	2007	2008
Budget	$418,000	$430,000	$500,000	$500,000	$500,000